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Efficiency of Niche Pork Production in 2006

A.S. Leaflet R2362

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Summary and Implications

Production of niche pork has been expanding in response to increased demand. Little information is known about production efficiency of niche pork. This report provides information on production efficiency from 41 niche pork producers.

The average female breeding herd size was 91 females. The average feed efficiency was 4.31 pounds of feed per pound of pork produced. The average feed efficiency for the top 15 herds was 3.74 and it was 4.25 for the bottom 15 herds. Average labor use was .87 hours per hundred pounds of pork produced. About one of every four pigs born alive died before weaning. Another eight percent died from weaning to market. Breeding herd death loss was in the 4 to 6 percent range.

The information summarized here shows striking production differences in many areas between the top 15 and bottom 15 producers. The areas with the largest differences are places with the most potential to help producers improve. Educational programming that targets these areas is being developed to help these producers make changes to improve their operations, which in turn will improve the position of this sector of the industry.

Introduction

In recent years the production of niche pork has been expanding in response to growing demand for products with specific attributes, such as pork from animals produced without use of antibiotics, using bedded pens with outdoor access, etc. This growth has occurred, in many situations, from the ground up. Entrepreneurial producers have identified unmet market demands and opportunities for new products. These producers then set out to develop products to satisfy this demand and systems to get these niche products to the consumer.

However, little information is known about the production efficiency of niche pork production systems. As demand expands for niche pork, accurate information on production efficiency needs to be available for producers to evaluate opportunities in niche pork production. Additionally, niche pork producers do not have sufficient information to benchmark their own operations and evaluate how they are performing and where they can look for

improvements. For those thinking about entering niche pork production, information needed to develop expected production levels is limited.

Given the lack of information, a project was undertaken to obtain production information for niche pork production. This information is needed to assist niche pork producers in determining their production potential and assist them in improving their production efficiencies.

Materials and Methods

To assist in obtaining niche pork production information, a focus was placed on working with niche pork producers in establishing production record systems for their pork production operations. Area livestock extension (swine) specialists in Iowa and Nebraska, a farm management specialist in Minnesota, and several Iowa Farm Business Association consultants worked directly with participants to establish and maintain the record system in 2006. They also worked with producers in providing year end summaries and analysis. The specialists' direct contact provided uniformity to data recording and analysis.

This report provides a summary of the production efficiency for participating niche pork producers for the year 2006. There were 41 niche pork farrow-to-finish producers who completed records for 2006. Five of these were certified organic producers, four were purebred Berkshire producers, and 32 were 'natural' producers, meaning their pigs were raised without antibiotics using bedded pens with outdoor access. An initial evaluation of the data showed that the average production efficiencies were similar between the organic, purebred Berkshire and other operations. Thus, all are combined for this analysis.

Results and Discussion

Production Efficiency-Feed and Labor

Production efficiency for feed and labor is provided in Table 1. The average number of breeding females was 91 over all 41 farms, while the average for the top 15 herds was 58 and the average for the bottom 15 was 130. Several explanations for the differences in herd size are possible. One is an observation made by project staff that the larger farms tended to farrow more continuously, which in turn can lead to herd health issues that can negatively impact production. Another possible explanation is that niche pork farms tend to have multiple enterprises, including crops and livestock, and there may be a shortage of labor to properly manage all enterprises on farms with more breeding females. This explanation appears to be supported by the labor use data in Table 1, which show that total labor used per breeding female per year was almost five hours more for the top group than the bottom group (24.6 hours vs. 19.8 hours). There may be other possible explanations for the differences in breeding herd sizes, but additional

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information is needed to better understand why these differences occurred. Plans are in place to collect this additional information.

Table 1 shows that total feed used per hundred pounds of pork produced averaged 413 for all producers, but 374 pounds for the top 15 herds and 425 for the bottom 15 herds. Thus, the top herds averaged 51 pounds less feed per hundred pounds of pork produced compared to the bottom herds. The pounds of supplement used per hundred pounds produced ranged from 69 for the top group to 93 for the bottom group, or a difference of 24 pounds or 26 percent. These data suggest that there is ample room for improvement in managing feed and supplement usage.

Labor use provided some interesting comparisons. Total labor use per breeding female per year was the highest for the top group (24.6 hours) and the lowest for the bottom group (19.8 hours). However, given the increased production efficiency of the top group, the average labor use per hundred pounds of pork produced was very similar between these groups: .87 hours per hundred pounds for the top farms and .83 hours per hundred pounds for the bottom farms.

Pig Production Efficiency

Additional production efficiency information is provided in Table 2. Birth to weaning death loss averaged 26.4 percent of pigs born alive for all producers; 25 percent for the top group and 27.9 percent for the bottom group. Thus, about one of every four pigs that were born alive did not make it to weaning. Pig death loss from weaning to market for the bottom group was about double compared to the top group (11.5% vs. 5.8%). Death losses of 11.5

percent from weaning to market and 27.9 percent from birth to weaning means those nearly 40 pigs of every 100 born alive do not reach market for the bottom group of producers. For the top producers this represents about 30 pigs of every 100 pigs.

Breeding herd death loss was in the 4 to 6 percent range: 5.6 percent for all herds, and 4.8 percent for the top herds and 4.1 percent for the bottom herds. Note that the reason the top and bottom herds had lower breeding herd death losses than all farms was a data anomaly, meaning that among the other 11 herds there were farms with high death losses. The top herds on average weaned one more pig per litter (7.2) than the bottom herds (6.2). On average the number of litters weaned per breeding female per year was 1.5, with this number being 1.62 for the top operations and 1.51 for the bottom operations. Also, the top herds averaged 11.8 pigs per sow per year while the bottom herds averaged 9.4 pigs per sow per year, which is a difference of 2.4 pigs, or about 25 percent. One explanation for the low pigs per sow per year numbers is that baby pigs in these systems are typically weaned at six weeks of age, and so sows are not able to be bred back as quickly.

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Table 1: Feed and Labor Production Information of Niche Pork Production – 2006, Sorted by Return to Capital, Unpaid Labor and Management.

Item	Group		
	Average	Top Farms	Bottom Farms
Number of producers	41	15	15
Hundred pounds of pork produced	2191	1667	3114
Average female inventory	91	58	130
Number of market hogs sold	682	462	1076
Average market hog weight, lb.	273	275	269
Pounds of feed per cwt. Produced	413	374	425
Pounds of grain per cwt. Produced	331	303	335
Pounds of supplement per cwt. Produced	79	69	93
Hours of labor used per cwt. Produced	0.87	0.87	0.83
Hours of labor used per breeding female per year	21.4	24.6	19.8

Table 2. Pig Production Efficiency of Niche Pork Production – 2006, Sorted by Return to Capital, Unpaid Labor and Management.

Item	Group		
	Average	Top Farms	Bottom Farms
Number of producers	41	15	15
Pig death loss, birth to weaning (% of farrowed live)	26.4	25.0	27.9
Pig death loss, weaning to market (% weaned)	7.9	5.8	11.5
Breeding herd death loss (% of breeding herd maintained)	5.6	4.8	4.1
Total herd death loss (% of pounds of pork produced)	3.7	2.6	4.3
Pounds of pork produced per female per year	2575	2989	2449
Number of females per boar	17	15	18
Number of pigs weaned per litter	6.7	7.2	6.2
Number of litters weaned per female per year	1.50	1.62	1.51
Pigs per sow per year	10.1	11.8	9.4
Litters weaned per farrow pen per year	5.3	4.9	5.7
Pigs weaned per farrow pen per year	34	34	35